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EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,774

Applicant(s)

HILL ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23, 26-67, 69-107 and 109-124 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 26-67, 69-107 and 109-124 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 16, 2006 have been fully considered but they are not persuasive.

a. Applicants have amended the independent claims 1, 41 and 83 to now require thermoplastic fibers of about 2 to 6 denier. Support for this is found in the Specification, no new matter included.

b. Independent claims 1 and 83 have been amended to now claim a specific range for the coefficient of static friction and the coefficient of kinetic friction of the substrate. It is noted that canceled claims 24-25 and 68-108 provided support for "a coefficient of static friction greater than 0.600 and a coefficient of kinetic friction greater than 0.400". However, the Examiner finds that the original claims and the disclosure do not provide sufficient support for the now claimed range that requires the coefficient of static friction to be less than 0.900 and the coefficient of kinetic friction less than 0.800.

c. Applicants have deleted "a binder" from the independent claims. This possess problems of indefiniteness in depending claims and also enablement problems as the substrate disclosed in the Specification is one comprising cellulosic fibers, thermoplastic fibers and a binder.

d. With regards to the prior art of Hayase, it is noted that the heat-fusible fibers of the reference have a fineness of about 0.5 to 5 dtex and are also thermoplastic. In view of Applicant's amendment to the claims, it is the Examiner's interpretation that structure of Hayase reads on the present claims.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-40 and 83-124 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is not sufficient support in the original claims and the disclosure for the now claimed range that requires the coefficient of static friction to be less than 0.900 and the coefficient of kinetic friction less than 0.800.

4. Claims 1-23, 26-67, 69-107 and 109-124 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The use of a binder is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The disclosure and the original claims, require the use of a binder to form the cleaning substrate structure, the amended claims now require a substrate comprising cellulosic fibers and thermoplastic fibers.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 2-6, 42-48 and 84-90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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applicant regards as the invention. Claims 2-6, 42-48 and 84-90 recite the limitation "said binder". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-2, 7-19, 32-37, 41-44, 49-61, 74-79, 83-86, 91-103 and 114-121 are rejected under 35 U.S.C. 102(b) as being anticipated by HAYASE et al. (US 2002/0106478 A1).

HAYASE et al. discloses a cleaning sheet, which comprises 10 to 90% by weight of thermoplastic fibers having a fineness of 10 to 150 dtex [9.01 – 1.35 denier; 1.11 tex=10 denier]. The cleaning sheet further comprises 10 to 90%, preferably 10 to 70% by weight of cellulosic fibers. (Abstract; [0026]) The reference further teaches the cleaning sheet 1 further comprising heat-fusible fibers having a fineness of about 0.5 to 5 dtex, relatively thinner than the thick thermoplastic fibers 2, in addition to the thick thermoplastic fiber 2 and the cellulosic fiber (3). Presence of such heat-fusible fiber is effective in preventing the thick thermoplastic fibers 2 from falling off and in improving scraping properties. The heat-fusible fiber is 1 to 50% by weight. [0036] The reference teaches using an air-lay method and bonding the fibers of the air-laid web by fusion or with a binder. Figure 4 shows one of the embodiments in which the thick thermoplastic fibers may be distributed with a gradient in the thickness direction. The cleaning sheet 1 can have the thick thermoplastic fibers in a larger amount in one side thereof than in the other side. [0069] The reference further teaches the use of heat-fusible conjugate fibers as the thick thermoplastic fiber 2. [0028] HAYASE et al. further teaches that the cleaning sheet can be

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used either as a dry sheet free of liquid or a wet sheet impregnated or sprayed with liquid such as an aqueous detergent. [0040] The reference further teaches the use of surface active agents (surfactants). [0042-0043]

With regards to the recited intended use limitations in claims 11-16, 55-58 and 95-100, it is the position of the Examiner that since prior art or record meets all of the structural limitations there is nothing on record to evidence that the cleaning sheet taught by HAYASE et al., would not function in the desired capacity. Applicant is invited to evidence otherwise. It is further noted that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). It is the Examiner's position that the same applies to the cleaning sheet of HAYASE et al.

8. Claims 1-2, 7-8, 11, 13, 14-15, 18-19, 26-29, 32-37, 41-44, 49-50, 52,53, 55-57, 60-61, 74-79, 83-86, 91-92, 94-95, 97-99, 102-103 and 116-121 are rejected under 35 U.S.C. 102(b) as being anticipated by ANNIS et al. (WO 97/21865).

ANNIS et al. discloses an abrasive nonwoven fibrous web useful as a dry or wet abrasive wipe or towel for the removal of dirt or grease. (Page 1) The reference teaches using a blend of natural pulp and man-made fibers with the thermoplastic component of the fiber furnish. The synthetic or man-made fibers are typically of two types: strength imparting fibers and bonding fibers. (page 7, lines 1-3, 17-19) The furnish contains about 5 –20 % by weight of the synthetic materials. (Page 8, lines 1-3) The reference teaches using bicomponent fibers. (Page 8, line 16) The reference also teaches the use of binder material. (Page 12, lines 4-7) The

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reference teaches using a papermaking process. (Page 17, Example 1) The reference further teaches that the concentration of the abrasive fiber remnants (formed by thermoplastic fibers) decreases across the thickness of the web material providing a fiber remnant gradient across the web. (Abstract) It is further noted that on Table III, the reference shows values that meet the presently claimed tensile, static and kinetic friction coefficients of the present invention. (page 18) With regard to the recited intended use limitations in claims 11-16, 55-58 and 95-100, it is the position of the Examiner that since prior art or record meets all of the structural limitations there is nothing on record to evidence that the cleaning sheet taught by HAYASE et al., would not function in the desired capacity. Applicant is invited to evidence otherwise. It is further noted that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987).

Claim Rejections - 35 USC §102/103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 32-37, 74-79 and 114-121 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over HAYASE et al. (US 2002/0106478 A1).

Although HAYASE et al. does not explicitly teach the claimed total absorbency and absorbency rate it is reasonable to presume that these properties are inherent to cleaning sheet of HAYASE et al. Support for said presumption is found in the use of like materials (i.e. the cleaning sheet is formed from similar contents of the different fibers and is made by an air-lay method). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of total absorbency and absorbency rate would obviously have been present once the HAYASE et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

Claim Rejections - 35 USC § 103

11. Claims 3-6, 45-48, 87-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASE et al. as applied above, and further in view of TRAPASSO et al. (US 4,172,173).

HAYASE et al. teaches the use of acrylonitrile-butadiene rubber, styrene-butadiene rubber, polyvinyl acetate, ethylene-vinyl acetate copolymer, and polyacrylate as useful binders, but fails to teach the use of a latex binder.

TRAPASSO et al. relates to enhanced ethylene-vinyl acetate latex compositions useful as binders for non-woven fabrics. (Col. 2, lines 43-45) The reference teaches that the nonwoven products of their invention are used as wiping cloths, among others. (Col. 2, lines 16-19) The reference discloses that commonly used lattices for non-woven fabrics are prepared from polymer of butadiene-styrene, butadiene-acrylonitrile, vinyl acetate, acrylic monomers, among others, but these have the drawback of cost. (Col. 2, lines 3-7) The reference teaches the use of

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enhanced ethylene-vinyl acetate binder latex compositions that are less expensive than those commonly used lattices and that produces softer non-woven fabrics. (Col. 2, lines 33-40)

Since TRAPASSO et al. is also directed to the construction of nonwoven materials suitable for wiping cloths, the purpose disclosed by TRAPASSO et al. would have been recognized in the pertinent art of HAYASE et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the type of binder used by HAYASE and provide with the latex binder of TRAPASSO et al. instead with the motivation of providing the nonwoven with a binder which produce non-woven fabric with a better "hand" as disclosed by TRAPASSO et al. (Col. 2, lines 33-39).

12. Claims 20-31, 62-67, 69-73, 104-107 and 109-112 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASE et al. as applied above, and further evidenced by ADAM et al. (US 5,811,178).

While HAYASE et al. is silent to the bulk density of the cleaning sheet, it is the Examiner's position that the values claimed herein are recognized to be within the skill of one practicing in the art of cleaning wipes. This is evidenced by ADAM et al. that discloses a high sorbency nonwoven fabric used in the construction of oil wipes and teaches that the bulk density of the materials is generally within the range of up to about 0.1 g/cc, preferably up to about 0.06 g/cc. (Col. 2, lines 53-55)

13. Claims 38-40, 80-72 and 122-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over HAYASE et al. as applied above, and further in view of KILKENNY et al. (US 2003/0100465 A1).

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HAYASE et al. is silent to the use of super-absorbent material.

KILKENNY et al. teaches cleaning wipes that include air-laid nonwoven web materials that can be made from a blend of wood pulp and synthetic fibers, bonded by binder. The reference teaches that the cleaning wipe can include super-absorbent material. (Page 3, first column)

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the material of HAYASE et al. and provide with super-absorbent material with the motivation of enhancing the fluid retention of the material during use.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 1264561 A1

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

May 30, 2006